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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,366	05/13/2002	Jan Hans Vestre	00300-912	4545
21839	7590	02/11/2004	EXAMINER	
BURNS DOANE SWECKER & MATHIS L L P			SUKMAN, GABRIEL S	
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3641

DATE MAILED: 02/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/070,366

Applicant(s)

VESTRE, JAN HANS

Examiner

Gabriel S. Sukman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34-44 is/are allowed.
- 6) ☒ Claim(s) 25-33 and 45-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 May 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date. _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 30 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 30 recites the limitation "the drive chamber" in line 14 of the claim. There is insufficient antecedent basis for this limitation in the claim. The claim would be allowable if rewritten to include all of the limitations of the claims it originally depended from, i.e., claim 30 would be allowable if rewritten to include the limitations of claims 29, 27, and 25, as was indicated in the previous Office Action.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 25-29, 31-33, and 45-48 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,641,938 to Gawlick et al. (hereinafter Gawlick).

Gawlick discloses all of the limitations of claim 25. Disclosed is an electric detonator that has an ignition charge (see col. 1, lines 31-32), an active battery unit (ref.

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no. 7, *see response to arguments, below*) which is associated with a circuit of controlling the emission of the igniter current, the battery (7) is movable between a resting position and an activated position for igniting the igniter. The battery activating means is pyrotechnically activated (col. 1, lines 24-34, "...providing gas-enriched primer charge for producing a gas pressure which serves to displace a battery so as to establish communication...") and the battery unit has the shape of a plunger or piston (as shown in the drawings) in a tubular bore of the detonator as claimed.

Claim 26 is anticipated by Gawlick as well since Gawlick discloses a pyrotechnic ignition tube that is connected to the detonator (delay charge, 4).

Claim 27 is anticipated by Gawlick in light of the drive charge disclosed (primer charge 5), which drives the battery unit.

Claim 28 is anticipated by Gawlick as well since Gawlick discloses, as can be seen in figure 1, that the ignition tube (4) connection is provided at the drive charge (5) since the two devices are in communication with each other.

The limitations of claim 29 are taught by Gawlick since the drive charge is in a drive chamber (housing, 16) to which an actuation part of the battery unit is exposed to be acted upon (upper surface of battery, 7, shown in figure 1).

Claim 31 is clearly anticipated by Gawlick since the drive chamber of Gawlick is tubular.

Claim 32 is clearly anticipated by Gawlick since the walls of the drive chamber must be formed in order to resist the predetermined driving pressure necessary for the detonator to function.

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Claim 33 is necessarily anticipated by Gawlick since the space ahead of the battery unit (as shown by comparison of figures 5 and 6) decreases in volume as the battery unit is activated, thereby compressing the gas that was originally in the space.

Claim 45 is anticipated by Gawlick since Gawlick discloses a contact arrangement (includes pole 8 in figures 2 and 4 and contact 20 in figures 5 and 6) in a circuit that emits igniter current from the battery that is open in the initial state (figures 2 or 5) and closed in an activated state (shown in dashed lines in figure 6). The contact is taught to be moved from the rest state to the activated state in response to a pyrotechnic activation (from charge, 5), in addition to a vibration or shaking movement.

Claim 46 is taught by Gawlick as well since the contact arrangement disclosed by Gawlick (e.g. contact, 20, in conjunction with contact cup, 22) moves in a lateral direction (the contact 20 must move laterally to make contact with cup, 22) while the battery unit moves in a longitudinal direction, thus the two directions of motion are essentially orthogonal.

Claim 47 is anticipated by the device of Gawlick since the battery unit (7) moves towards the ignition charge (which is below the battery in the figures) and is disclosed to be displaced through a distance of "several millimeters" (col. 2, line 11), which is "*about* 1 cm" (emphasis added) as claimed.

Claim 48 is anticipated by Gawlick in view of the insulating ring 12, which provides for the complete electrical insulation of the battery.

Allowable Subject Matter

Claims 34-44 are allowed.

Response to Arguments

Applicant's arguments filed 12 November 2003 have been fully considered but they are not persuasive.

The only substantive traversal made by Applicant pertains to the addition of the word "active" before "battery unit" in claim 25. The examiner asserts that the Gawlick patent still anticipates the newly amended claim for three reasons.

Firstly, Applicant's remarks, taken with the newly amended claim 25, do not represent a consistent argument. The claim defines the battery unit as an "active battery unit," but later in the claim are defined two positions of the battery unit: a resting position and an *activated* position. It would therefore seem that the original claim has already proven the newly added limitation as contradictory since there exist two states of the battery unit, one being in a resting, non-active position, and the second being in an activated position. At least one of these limitations needs to be changed in order to maintain consistency. It is noted that the Gawlick device teaches a safety position and an "activated position" of the battery as well. This argument exists here notwithstanding the difference in meaning between the two possible uses of the word "active" since claim language need be consistent throughout.

Secondly, Gawlick does indeed teach an active battery unit inasmuch as one is defined in the specification of the application. Applicant references the specification of the application to distinguish between the battery of Gawlick and the "active battery"

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claimed. However the specification only states that the invention "is thus based on the understanding that primarily battery connection must not take place by switch-controlled connection or externally provided activation of a battery, but by an active battery unit (consisting of one or more active cells)" (page 2, lines 18-22). An "active cell" has not been further defined. Thus it would seem that an active battery unit would merely involve a battery that is self-sufficient (i.e., not conditioned by the requirements of other, non-active, batteries to be activated by a switch or some external force as discussed in the cited disclosure) and would include at least one "active cell," whatever that may involve¹. In the unit of Gawlick, once the striker element (2) is released, there is no further external force necessary to effectuate detonation. The battery unit (which may include the battery, 7, as well as the container, 6) is therefore active since it doesn't require any external activation or switch and at least one of the cells, 6 or 7, is active since it stands ready to function. Further, and possibly most convincing, Gawlick alternatively discloses the use of a "simple battery," which is certainly an active battery unit, in conjunction with the use of the invention in mines (col. 2, lines 57-72).

Lastly, it is briefly noted that claims directed to a product rarely set a limitation on chronology. Therefore, if the limitations of the claim are met at any point of time during the course of use of the invention in the prior art, the claims are anticipated. Thus, the invention of Gawlick, otherwise meeting all of the claimed limitations, additionally comprises an "active battery unit" at the point in time when the potassium hydroxide has activated the battery.

¹ active: ...2. Functioning or capable of functioning... *The American Heritage® Dictionary of the English*

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

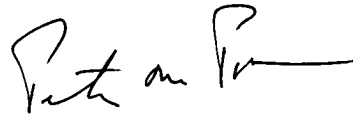
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gabriel S. Sukman whose telephone number is (703) 308-8508. The examiner can normally be reached on M-F, 8:30-6:00, every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Carone can be reached on (703) 306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PETER M. POON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600